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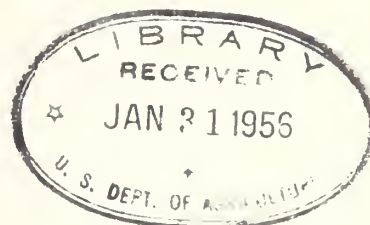
UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

Metropolitan Economic Areas as a Tool for Marketing
Research in Horticultural Specialties

by

M. Truman Fossum

Agricultural Economist



It has been said that "The need of analysts for a set of areas of intermediate size is a consequence of the fact that the economy of the United States is composed of a multitude of different activities and that each of these activities tends to be concentrated in certain areas which are favorable for its conduct. This situation leads to the specialization of areas in selected activities and to a system of interdependency and exchange among areas" (1). 1/

The purpose of this paper is to provide an indication of the extent to which the production and trade in horticultural specialties is concentrated in major urban areas and to test the effectiveness of the concept of metropolitan areas as a tool for marketing research.

Characteristics of Data

Publication of the results of the 1948 Census of Business and the 1950 Census of Agriculture, Population, and Housing involves the widespread usage of State economic areas. These areas are classified as metropolitan and non-metropolitan markets. In either instance the given economic unit or market is quite homogenous in respect to industry, agriculture, population, physiography, and the economy in general.

The standard metropolitan areas (fig. 1) (1) consist of one or more counties, except in the New England States, where the prescribed areas are defined by town boundaries. For the purposes of this report, the standard metropolitan areas for the New England States are adapted to a county basis. This is done to provide data comparable to those in census publications, which resorted to this deviation from the original determinations.

This procedure resulted in the selection of 150 "metropolitan State economic areas." Being based on State and county boundaries, these areas include instances in which two or more State areas adjoin segments of a major city or

1/ Figures in parentheses refer to literature cited, page 6.

market area. Consequently, for purposes of compiling and assembling data, the information for 150 metropolitan State economic areas becomes the framework from which totals for 128 markets (irrespective of State lines but conforming to county lines) are achieved. Of the 3,073 counties in the United States, 239 are in the 128 market areas.

In addition to other stipulations (1) for being qualified, a metropolitan State economic area consists of a county or counties in which is located a city of 50,000 or more persons, and adjoining counties with a specified density of population and kind of labor force.

For many purposes, including marketing research, the concept of metropolitan economic areas is a more meaningful and satisfactory basis for comparisons and analyses than the restriction to State, corporate city, or county delineations as in the past. These uses are not confined to information pertaining to commerce, transportation, manufacturing, and other non-agricultural pursuits which are identified with cities or markets. One author (2) has said, "It should be kept in mind that in spite of the common assumption that metropolitan areas are strictly urban, many of them include very important agricultural fringes of intensive agriculture, particularly fruit, truck, poultry, and dairy farming. Los Angeles County, California, for instance, is still the leading agricultural county in the United States for several characteristics, including the dollar volume of products sold, traded, or used, and the number of cows milked."

This paper pertains to an industry having to do with a kind of farm production for which exceptionally high percentages of the totals of both production and distribution (wholesale, retail, and service trade) take place within the boundaries of the 128 metropolitan economic areas or markets. The industry of the horticultural specialties, better known as commercial floriculture and commercial ornamental horticulture 2/, provides a unique opportunity for testing the adaptability of the metropolitan economic areas for both agricultural and nonagricultural marketing and other economic research. Development of the data was further spurred by the fact that the 1950 Census of Agriculture included a special census of the horticultural specialty crop producers in the United States. This special census (3) provided data essential to this study.

2/ "Commercial floriculture" is a trade term indicating the production and distribution of cut flowers, flowering and foliage potted plants, florist greens, bedding plants and vegetable plants. "Commercial ornamental horticulture" is a trade term indicating the production and distribution of woody and herbaceous ornamental plants, fruit stocks, bulbs, flower seed, and vegetable seed. The commodities of floriculture are used primarily for the decoration of interiors of homes and other buildings and for personal adornment, whereas those of ornamental horticulture are used primarily for re-planting outdoors.

The Census of Agriculture for previous periods of time included enumeration and reporting of miscellaneous farm crops classified as horticultural specialties, which indicated the relative importance of this kind of production from many of the counties included in the metropolitan economic areas. This is borne out by the summary tables in this paper.

Summary data of table 1 are extracted from a recent publication of the Bureau of Agricultural Economics (4). Specific data are presented for the 10 leading markets of the United States in the order of their population. These 10 metropolitan economic areas or markets include 62 of the 239 counties which qualified for the standard metropolitan State economic areas (table 4). There is sufficient diversification, geographically, historically, and economically, among these 10 markets to permit inspection of a wide range of circumstances under which the business of floriculture and ornamental horticulture has developed and is being done.

Detailed data are not shown for the remaining 118 markets. By means of totals for these markets, their relationship to the 10 leading markets and to the nonmetropolitan State economic areas is shown in table 2. Location, delineation, geographic distribution, and relative area of the 128 standard metropolitan areas are shown in figure 1. Sample analyses of the data are shown in table 3.

Percentage Distribution of Sales

As shown by table 2, the 62 counties composing the 10 leading markets accounted for more than 26 percent of the population and dwelling units of the United States, more than 30 percent of all retail trade, nearly 40 percent of the wholesale value of floricultural crop production, about 33 percent of the retail trade of floriculture, 21 percent of the wholesale value of ornamental horticultural crops, and nearly 30 percent of the retail trade of ornamental horticulture.

It is significant that, on the basis of wholesale value of the floricultural crops produced within the market areas, the two areas of New York-Northeastern New Jersey and Chicago were self-sufficient for the requirements of the retail trade in these areas. Los Angeles, Philadelphia, Boston, and San Francisco-Oakland produced considerably more crop value within their respective market areas than was required by the retail trade of floriculture. Detroit, Pittsburgh, St. Louis, and Washington, D. C., are market areas which were deficient in crop production for the retail trade of floriculture within the respective areas.

In these 10 market areas the total of floricultural crops produced was in excess of the requirements of the retail trade of floriculture by more than 6 percent, on the basis of wholesale value; whereas, for ornamental horticulture, the crop production was deficient for the retail trade to the extent of about 8 percent, on the basis of wholesale value.

Retail florists in these 10 markets who were not associated with crop production conducted more than 37 percent of such trade in the country. Furthermore, in every one of the 10 markets this percentage of national total was greater for the retailers unassociated with crop production than for total retail trade in floriculture.

Retail growers in floriculture in the 10 markets conducted about 20 percent of such business done in the country. The importance of retail growers relative to other retail trade of floriculture is greatest in the Boston and Chicago markets and of least importance in Los Angeles and San Francisco-Oakland.

The 10 leading metropolitan areas were in many respects about equal in importance as a market to the remaining 118 standard metropolitan economic areas made up of 177 counties. Of population, dwelling units, and all retail trade, the 118 markets represented about 1 percent more than did the 10 leading markets. The wholesale value of floricultural production in the group of 118 markets represented nearly 10 percent less than that of the 10 leading markets, and, on the basis of value, the production did not fill the requirements of the retail trade of floriculture. Retail growers were considerably more important in the 118 markets than in the 10 leading markets. From 34 to 36 percent of the United States total for each of the three kinds of retail trade of floriculture (retail florists not associated with crop production, retail growers and other retail outlets) was conducted in the 118 markets. In the 118 markets ornamental horticultural crop production and retail trade each exceeded that of the 10 leading markets by about 6 percent. In this field, as in floriculture, retail growers of the 118 markets were more important than in the 10 leading markets. About 35 percent of the retail trade of both floriculture and ornamental horticulture was conducted in the 118 markets.

The 128 standard metropolitan markets represented 54 percent of the United States totals for population and dwelling units, more than 61 percent of all retail trade of all kinds, 68 percent of the wholesale value of the crops and of the retail trade of floriculture, and more than 48 percent of the wholesale value of ornamental horticultural crops and more than 64 percent of such retail trade.

Looked upon as an entity, the 128 markets had production equal to the requirements for floricultural products sold at retail, while the retail trade of ornamental horticulture exceeded available production in the areas by about 15 percent. Retail growers in the 128 markets represented more than 53 percent of the United States totals for this kind of retail trade in both floriculture and ornamental horticulture.

Analysis of Sales

Analytical data of table 3 show that retail sales of floriculture in 1949 amounted to \$4.30 per capita, more than \$14 per dwelling unit, and about 1/2 of 1 percent of all retail trade in the United States. Retail sales of

ornamental horticulture amounted to \$2.30 per capita, nearly \$7.60 per dwelling unit, and about 1/4 of 1 percent of all retail trade in the United States in 1949.

Among the 10 leading markets, Chicago had the highest retail floricultural sales per capita, 155 percent of the United States average; Los Angeles was the lowest, with per capita sales slightly less than 100 percent of the United States average. For retail ornamental horticulture, St. Louis had the highest sales per capita, about 175 percent of the United States average; New York-Northeastern New Jersey was about average, and the per capita sales in Boston were the lowest at 85 percent of the United States average.

As a group, these 10 leading markets experienced per capita retail sales of floriculture of 125 percent of the United States average and per capita retail sales of ornamental horticulture of 110 percent of the United States average.

In the remaining 118 standard metropolitan areas, the retail sales per capita were 127 percent of the United States average for both retail floriculture and retail ornamental horticulture.

The industry differed from most other kinds of agriculture in that high percentages of the crop production of the horticultural specialties took place within the standard metropolitan economic areas where high percentages of the retail distribution also occurred. The percentage of retail sales, as measured by wholesale value of the crops, indicates that the 10 leading market areas had excess production in sufficient quantity to care for the additional requirements of the other 118 markets. The situation for ornamental horticulture was one of production deficiency of about 5 percent for both the 10 leading markets and the remaining 118 markets.

Sales per capita, per dwelling unit, and as a percentage of all retail trade for both floriculture and ornamental horticulture in that part of the United States which is not included in the standard metropolitan areas are significantly lower than those of the United States average. In these non-metropolitan areas, the production value is sufficient for the retail requirements of floriculture and exceeds the retail requirements of ornamental horticulture by nearly 10 percent.

Conclusions

The data indicate the usefulness, adaptability, and realistic nature of the concept of metropolitan economic areas for marketing research relating to horticultural specialties. The example used represents an industry composed of two major lines of production and distribution. There has been reason for believing that the farm production of one of these, commercial floriculture, was concentrated in counties of the standard metropolitan areas and that high percentages of the farm production of commercial ornamental horticulture also occurred in these areas, though not to the extent which existed for floriculture. The data presented support this observation.

Such a perspective of an industry and of many marketing relationships could not be obtained with such applicable measurements by restricting analysis to individual States, counties, or corporate city areas. The industry used as an example provides a unique situation for determining the effectiveness of standard metropolitan economic areas as a tool for marketing research pertaining to both production and distribution of a given group of farm commodities.

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Table 1.--Distribution of sales of horticultural specialties among specified markets, United States, 1949

Markets	General data			Commercial floriculture				Commercial ornamental horticulture				
	Thousands	Dwelling : units	All retail trade	Wholesale : value of : floricult- ural crops:	Total : dollars	Retail floriculture - sales		Wholesale : value of : nursery crops	Total : dollars	Retail ornamental horticulture - sales		
						Total : dollars	Retail : dollars			Total : dollars	Retail : dollars	
												florists
United States	150,697	46,151	130,520,548	190,909	650,000	377,250	132,479	140,271	71,053	350,000	82,702	267,298
1. New York - N. E. New Jersey	12,832	3,971	12,652,074	20,322	70,037	46,844	7,752	15,441	3,821	29,566	4,978	24,588
2. Chicago	5,476	1,656	5,989,723	10,490	36,585	22,251	6,329	8,005	1,319	14,657	1,584	13,073
3. Los Angeles	4,339	1,530	4,721,241	8,952	18,038	13,284	945	3,809	5,155	11,797	3,763	8,034
4. Philadelphia	3,661	1,052	3,345,506	9,009	18,174	11,756	2,474	3,944	1,431	8,728	1,958	6,770
5. Detroit	2,973	862	3,014,275	3,110	14,628	9,284	2,156	3,188	354	7,272	641	6,631
6. Boston	2,858	829	2,675,555	5,982	15,574	9,082	2,982	3,510	565	5,637	1,131	4,506
7. San Francisco - Oakland	2,214	710	2,366,588	10,664	11,078	8,237	500	2,341	1,519	7,249	2,060	5,189
8. Pittsburgh	2,206	630	1,985,201	2,766	11,630	7,714	1,390	2,526	163	5,590	583	5,007
9. St. Louis	1,673	510	1,567,167	2,286	8,965	6,386	580	1,999	345	6,860	687	6,173
10. Washington, D. C.	1,458	426	1,485,845	847	8,696	5,740	956	2,000	309	4,729	849	3,880
Total 10 markets	39,690	12,176	39,803,175	74,428	213,405	140,578	26,064	46,763	14,981	102,085	18,234	83,851
118 markets	41,742	12,782	40,497,184	55,920	230,002	135,538	45,095	49,369	19,484	122,984	25,769	97,215
Grand total 128 markets	81,432	24,958	80,300,359	130,348	443,407	276,116	71,159	96,132	34,465	225,069	44,003	181,066
Rest of U. S.	69,265	21,193	50,220,189	60,561	206,593	101,134	61,320	44,139	36,588	124,931	38,699	86,232

1/ 1948.

Bureau of the Census.

Table 3.--Analyses of sales of horticultural specialties among specified markets, United States, 1949

Markets	Commercial floriculture						Commercial ornamental horticulture					
	Retail floriculture - sales			Wholesale value of crops as:			Retail ornamental horticulture - sales			Wholesale value of nursery crops		
	per capita			Percentage of:			Per capita			As percentage of:		
	Percentage of:			Percentage of:			Percentage of:			Percentage of:		
	Actual	United States	average	Actual	United States	average	Actual	United States	average	Actual	United States	average
	Dollars	Percent	Dollars	Dollars	Percent	Percent	Dollars	Percent	Dollars	Dollars	Percent	Percent
United States	4.31	100.0	14.08	0.5	29.4	2.32	100.0	7.58	0.3	20.3		
1. New York - N.E. New Jersey	5.46	126.7	17.64	.6	29.0	2.30	99.1	7.45	.2	12.9		
2. Chicago	6.68	155.0	22.09	.6	28.7	2.68	115.5	8.85	.2	9.0		
3. Los Angeles	4.16	96.5	11.79	.4	49.6	2.72	117.2	7.71	.2	43.7		
4. Philadelphia	4.96	115.1	17.28	.5	49.6	2.38	102.6	8.30	.3	16.4		
5. Detroit	4.92	114.2	16.97	.5	21.3	2.45	105.6	8.44	.2	4.9		
6. Boston	5.45	126.5	18.79	.6	38.4	1.97	84.9	6.80	.2	10.0		
7. San Francisco - Oakland	5.00	116.0	15.60	.5	96.3	3.27	140.9	10.21	.3	21.0		
8. Pittsburgh	5.27	122.3	18.46	.6	23.8	2.53	109.1	8.87	.3	2.9		
9. St. Louis	5.36	124.4	17.58	.6	25.5	4.10	176.7	13.45	.4	5.0		
10. Washington, D.C.	5.96	138.3	20.41	.6	9.7	3.24	139.7	11.10	.3	6.5		
Total 10 markets	5.38	124.8	17.53	.5	34.9	2.57	110.8	8.38	.3	14.7		
118 markets	5.51	127.8	17.99	.6	24.3	2.95	127.2	9.62	.3	15.8		
Grand total 128 markets	5.45	126.5	17.77	.6	29.4	2.76	119.0	9.02	.3	15.3		
Rest of U. S.	2.98	69.1	9.75	.4	29.3	1.80	77.6	5.89	.2	29.3		

Table 4.--Counties included in 10 leading markets, United States, 1949

Market	:	Counties
New York - Northeastern New Jersey	:	Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, West- chester - New York; and Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Somerset, Union - New Jersey
Chicago	:	Cook, DuPage, Kane, Lake, Will - Illinois; and Lake - Indiana
Los Angeles	:	Los Angeles, Orange - California
Philadelphia	:	Bucks, Chester, Delaware, Montgomery, Philadelphia - Pennsylvania; and Burlington, Camden, Gloucester - New Jersey
Detroit	:	Macomb, Oakland, Wayne - Michigan
Boston	:	Essex, Middlesex, Norfolk, Suffolk - Massachusetts
San Francisco-Oakland	:	Alameda, Contra Costa, Marin, San Francisco, San Mateo, Solano - California
Pittsburgh	:	Allegheny, Beaver, Washington, Westmoreland - Pennsylvania
St. Louis	:	St. Charles, St. Louis, St. Louis City - Missouri; and Madison, St. Clair - Illinois
Washington, D. C.	:	District of Columbia; and Arlington, Fairfax, Alexandria City, Falls Church City - Virginia; and Montgomery, Prince Georges - Maryland

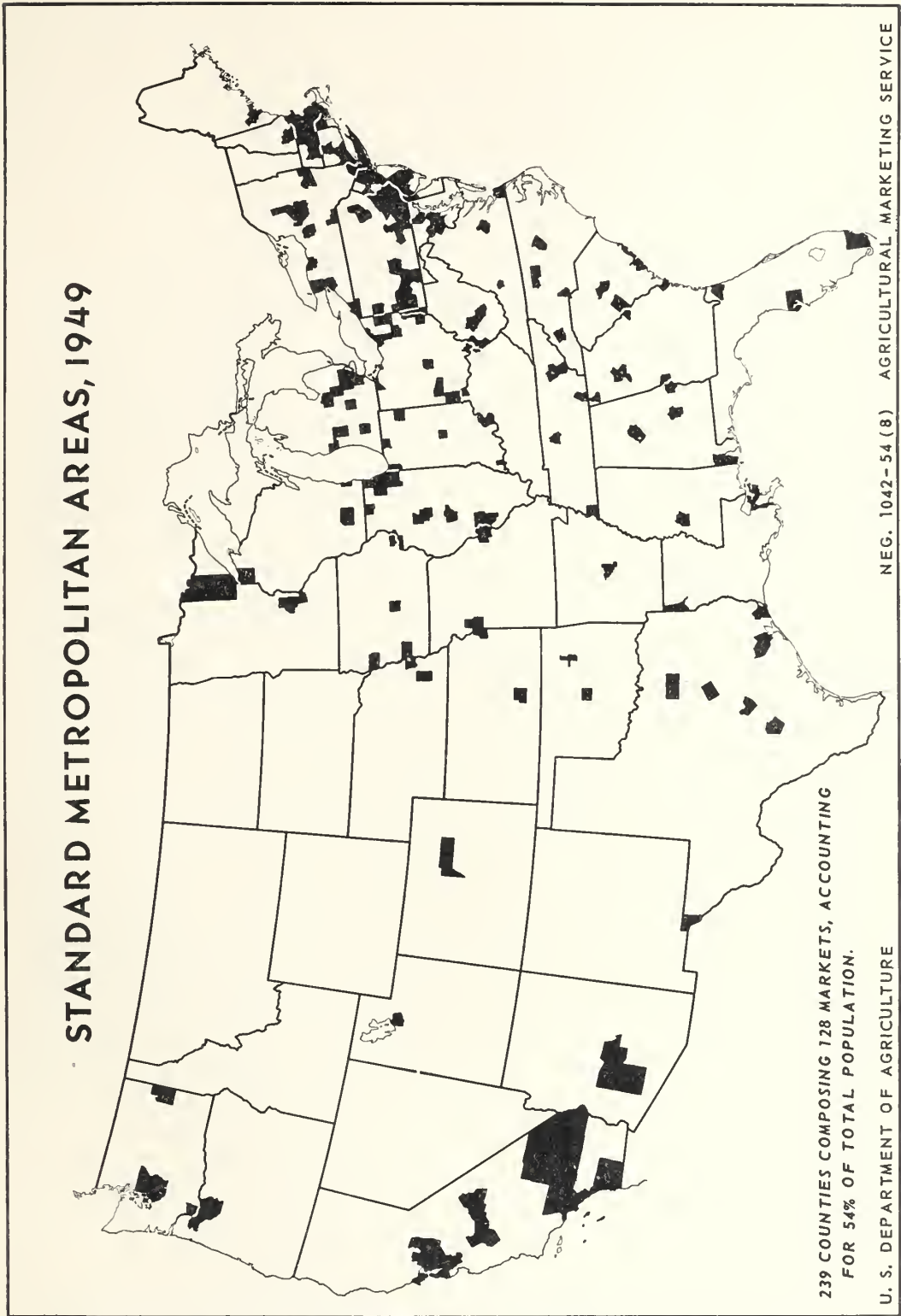


Figure 1

